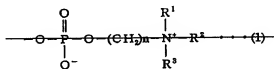


# AMENDMENTS TO THE CLAIMS

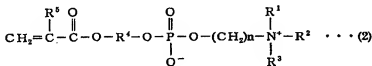
This listing of claims will replace all prior versions and listings of claims in the application:

## LISTING OF CLAIMS:

1. (currently amended): A vessel for embryoid formation for use in ~~floating-culture~~ floating-culture of embryonic stem cells to form embryoid bodies, comprising a coating layer formed from a copolymer of monomer (M) represented by the formula (2) and glycidyl (meth)acrylate, and chemically bonded ~~to compound having a phosphoryletholine-like group represented by the formula (1)~~, on a vessel surface defining a region for ~~floating-culture~~ floating culture of embryonic stem cells:



wherein  $\text{R}^1$ ,  $\text{R}^2$ , and  $\text{R}^3$  are the same or different groups, and each stands for a hydrogen atom, an alkyl or hydroxyalkyl group having 1 to 6 carbon atoms; and n is an integer of 1 to 4



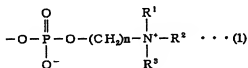
wherein  $\text{R}^1$ ,  $\text{R}^2$ , and  $\text{R}^3$  each stands for a methyl group,  $\text{R}^4$  stands for an ethyl group,  $\text{R}^5$  stands for a hydrogen atom; and n is an integer of 2.

Claim 2 (canceled).

3. (original): The vessel for embryoid formation of claim 1, wherein a ratio (P/C) of the amount of phosphorus element P to the amount of carbon element C as measured by X-ray photoelectron spectroscopy on the vessel surface having said coating layer formed thereon is 0.002 to 0.3.

4. (withdrawn): A method for forming embryoid bodies comprising the steps of:

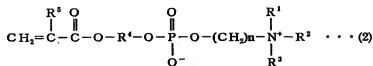
(A) providing a vessel for embryoid formation having a coating layer formed from a compound having a phosphorylcholine-like group represented by the formula (1), on a vessel surface defining a region for floating culture of embryonic stem cells:



wherein  $\text{R}^1$ ,  $\text{R}^2$ , and  $\text{R}^3$  are the same or different groups, and each stands for a hydrogen atom, an alkyl or hydroxyalkyl group having 1 to 6 carbon atoms; and n is an integer of 1 to 4; and

(B) floating culturing embryonic stem cells in said vessel for embryoid formation to form embryoid bodies.

5. (withdrawn): The method of claim 4, wherein said compound having a phosphorylcholine-like group comprises at least one of a homopolymer of monomer (M) represented by the formula (2) having a phosphorylcholine-like group and a copolymer of monomer (M) and another monomer:



wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> are the same or different groups, and each stands for a hydrogen atom, an alkyl or hydroxyalkyl group having 1 to 6 carbon atoms, R<sup>4</sup> stands for an alkyl group having 1 to 6 carbon atoms, R<sup>5</sup> stands for a hydrogen atom or a methyl group; and n is an integer of 1 to 4.

6. (withdrawn): The method of claim 4, wherein a ratio (P/C) of the amount of phosphorus element P to the amount of carbon element C as measured by X-ray photoelectron spectroscopy on the vessel surface having said coating layer formed thereon is 0.002 to 0.3.

7. (canceled).

8. (withdrawn): The method of claim 5, wherein said monomer (M) is selected from the group consisting of 2-((meth)acryloyloxy(ethyl-2'-(trimethylammonio) ethylphosphate, 3-((meth)acryloyloxy)propyl-2'-(trimethylammonio)ethylphosphate, 4-((meth)acryloyloxy) butyl-2'-(trimethylammonio)ethylphosphate, 5-((meth)acryloyloxy)pentyl-2'-(trimethylammonio)ethylphosphate, 6-((meth)acryloyloxy)hexyl-2'-(trimethylammonio)ethylphosphate, 2-((meth)acryloyloxy)ethyl-2'-(triethylammonio)ethylphosphate, 2-((meth)acryloyloxy)ethyl-2'-(tripropylammonio)ethylphosphate, 2-((meth)acryloyloxy)ethyl-2'-(tributylammonio)ethylphosphate, 2-((meth)acryloyloxy)ethyl-2'-(tricyclohexylammonio)ethylphosphate, 2-((meth)acryloyloxy)ethyl-2'-(triphenylammonio)ethylphosphate, 2-((meth)acryloyloxy)propyl-2'-(trimethylammonio)ethylphosphate, 2-((meth)acryloyloxy)butyl-2'-(trimethylammonio)ethylphosphate, 2-((meth)acryloyloxy)pentyl-

2'-(trimethylammonio)ethylphosphate, and 2-((meth)acryloyloxy)hexyl-2'-  
(trimethylammonio)ethylphosphate.

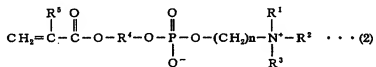
9. (withdrawn): The method of claim 5, wherein said another monomer is selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, butyl(meth)acrylate, 2-ethylhexyl(meth)acrylate, lauryl(meth)acrylate, stearyl(meth)acrylate, cyclohexyl(meth)acrylate, benzyl(meth)acrylate, phenoxyethyl(meth)acrylate, polypropylene glycol(meth)acrylate, styrene, methylstyrene, chloromethylstyrene, methyl vinyl ether, butyl vinyl ether, vinyl acetate, vinyl propionate, 2-hydroxyethyl(meth)acrylate, 2-hydroxybutyl (meth)acrylate, and 4-hydroxybutyl(meth)acrylate, acrylic acid, methacrylic acid, styrenesulfonic acid, (meth)acryloyloxyposphonic acid, 2-hydroxy-3-(meth)acryloyloxypropyl trimethyl ammonium chloride, (meth)acrylamide, aminoethylmethacrylate, dimethylaminoethyl(meth)acrylate, polyethylene glycol (meth)acrylate, glycidyl (meth)acrylate, and mixtures thereof.

10. (withdrawn): The method of claim 5, wherein the weight average molecular weight of said homopolymer and said copolymer is 5000 to 5000000.

11. (new): The vessel for embryoid formation of claim 1, wherein said monomer (M) represented by the formula (2) is 2-(methacryloyloxy)ethyl-2'-(trimethylammonio)ethylphosphate.

12. (new): A vessel for embryoid formation for use in floating-culture of embryonic stem cells to form embryoid bodies, comprising a coating layer formed from a copolymer of monomer (M) represented by the formula (2), glycidyl (meth)acrylate, and another monomer

selected from the group consisting of methyl(meth)acrylate, ethyl(meth)acrylate, butyl(meth)acrylate, 2-ethylhexyl(meth)acrylate, lauryl(meth)acrylate, stearyl(meth)acrylate, cyclohexyl(meth)acrylate, benzyl(meth)acrylate, phenoxyethyl(meth)acrylate, polypropylene glycol(meth)acrylate, styrene, methylstyrene, chloromethylstyrene, methyl vinyl ether, butyl vinyl ether, vinyl acetate, vinyl propionate, 2-hydroxyethyl(meth)acrylate, 2-hydroxybutyl(meth)acrylate, 4-hydroxybutyl(meth)acrylate, acrylic acid, methacrylic acid, styrenesulfonic acid, (meth) acryloyloxyphosphonic acid, 2-hydroxy-3-(meth)acryloyloxypropyl trimethyl ammonium chloride, (meth)acrylamide, aminoethylmethacrylate, dimethylaminoethyl(meth)acrylate, polyethylene glycol (meth)acrylate, and mixtures thereof, and chemically bonded to a vessel surface defining a region for floating-culture of embryonic stem cells:



wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> each stands for a methyl group, R<sup>4</sup> stands for an ethyl group, R<sup>5</sup> stands for a hydrogen atom or a methyl group; and n is an integer of 2.

13. (new): The vessel for embryoid formation of claim 12, wherein a ratio (P/C) of the amount of phosphorus element P to the amount of carbon element C as measured by X-ray photoelectron spectroscopy on the vessel surface having said coating layer formed thereon is 0.002 to 0.3.

14. (New) The vessel for embryoid formation of claim 12, wherein said monomer (M) represented by the formula (2) is 2-(methacryloyloxy)ethyl-2'-(trimethylammonio)-ethylphosphate.